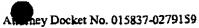
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- The method of Claim 36, wherein the human cell is an adult cell. 37.
- 38. The method of Claim 36, wherein the human cell is selected from the group consisting of epithelial, neural epidermal, keratinocyte, hematopoietic, melanocyte, chondrocyte, B lymphocyte, T lymphocyte, erythrocyte, macrophage, monocyte, mononuclear, fibroblast, cardiac muscle, and non-cardiac muscle cell.
- 39. The method of Claim 36, wherein the human cell is an epithelial cell, lymphocyte or fibroblast.
- 40. The method of Claim 36, wherein the enucleated bovine oocyte is matured prior to enucleation.
- 41. The method of Claim 36, wherein step (ii) comprises inserting a human cell into the bovine oocyte, the method further comprising fusing the human cell and bovine oocyte
  - 42. The method of Claim 41, wherein fusion is effected by electrofusion.
- 43. The method of Claim 36, wherein the nuclear transfer unit is activated by exposure to ionomycin and dimethylaminopurine (DMAP).
- The method of Claim 36, wherein the activated nuclear transfer unit is 44. cultured to to obtain a multicellular nuclear transfer unit comprising about 50 cells.
- 45. The method of Claim 36, wherein step (v) comprises culturing cells comprising the inner portion of the nuclear transfer unit on a feeder layer.
  - 46. The method of Claim 45, wherein the feeder layer comprises fibroblasts
- 47. The method of Claim 46, wherein the feeder layer comprises m use embryonic fibroblasts.

- 48. Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 36.
- 49. Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 39.
- 50. Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 46.
- 51. A method of producing embryo-derived, proliferating cells having human nuclear DNA and bovine-derived mitochondria, comprising the following steps:
  - (i) enucleating a bovine oocyte;
- (ii) inserting a human epithelial cell or epithelial cell nucleus into the bovine oocyte under conditions suitable for the formation of a nuclear transfer unit;
  - (iii) activating the resultant nuclear transfer unit;
- (iv) culturing the activated nuclear transfer unit to obtain a nuclear transfer unit having at least 16 cells; and
- (v) culturing cells comprising the inner portion of the nuclear transfer unit of step (iv) in vitro on a feeder layer of mouse embryonic fibroblasts to obtain cells proliferating as a colony.
- 52. Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 51.

## REMARKS

This amendment is responsive to the Office Action mailed on August 15, 2002. Claims 1-35 are canceled and new claims 36-52 are submitted. The amendment does not introduce new matter.

Support for the claimed method of producing isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria is found in the specification, for example, on page 9, lines 18-30, and in Example 1. Support for the step of culturing the activated nuclear transfer unit to obtain a multicellular nuclear transfer unit comprising at